

8-17 IMPACT ATTENUATOR SYSTEMS**8-17.1 Description**

This Work consists of furnishing, constructing, repairing, and removing permanent and temporary impact attenuator systems selected from the approved list shown in the Plans.

8-17.2 Materials

Sand for inertial barrier systems shall not contain more than 5-percent water by weight. Commercial grade urea shall be thoroughly mixed with the sand in an amount equal to 5-percent, by weight, of the sand.

Undamaged sand barrel impact attenuators that have been previously utilized may be utilized in a temporary impact attenuator array only, if inspected and approved by the Engineer prior to use.

8-17.3 Construction Requirements

The assembly and installation of all attenuator systems, except those utilizing sand barrels, shall be supervised at all times by either a manufacturer's representative or an installer who has been trained and certified by the manufacturer of the system. If the supervision is provided by a trained installer, a copy of the installer certification shall be provided to the Engineer prior to installation.

Assembly and installation shall be in accordance with the manufacturer's recommendations. This Work shall include the connection to a concrete barrier, bridge abutment or a transition section identified in the Plans, construction of a steel reinforced concrete pad or concrete backup, and anchorage to the pavement, if required by the manufacturer's assembly and installation procedures.

The Contractor shall have a complete set of replacement parts on the jobsite for each type of temporary impact attenuator in use on the project and shall repair all damaged impact attenuators immediately.

When the Engineer determines that a temporary impact attenuator is no longer needed, then the Contractor shall remove that attenuator from the project. The removed equipment shall remain the property of the Contractor.

8-17.4 Measurement

Temporary and permanent impact attenuators will be measured per each for each installation.

Resetting impact attenuators will be measured per each for each installation that is adjusted or reset to a new location on the project. The Contracting Agency will not measure resetting impact attenuators when it is for the benefit of the Contractor's operations.

8-17.5 Payment

Payment will be made in accordance with Section 1-04.1, for the following Bid items when they are included in the Proposal:

"Temporary Impact Attenuator", per each.